# Lakes, Ponds and Reservoirs

**For more information on this project, please contact:**
Jonathan Meerbeek
Spirit Lake Hatchery, 122 252nd Avenue
Spirit Lake, IA 51360
(712) 336-1840
**Jonathan.Meerbeek@dnr.iowa.gov**

## Population Dynamics of Adult Walleyes in Iowa's Large Natural Lakes

Many studies have concluded that natural reproduction of walleye in Iowa's natural lakes is extremely limited. Therefore, annual stockings of sac-fry and fingerlings have been needed to sustain these fisheries. Despite stocking efforts, walleye population density and harvest in these lakes has declined in recent years and was not meeting angler expectations. Previous research concluded that consistent recruitment is the key to increased walleye densities in Iowa's natural lakes; however, it was found that recruitment alone would not result in the walleye densities needed to meet management objectives. Therefore, a combination of improved survival and recruitment of stocked walleye and harvest regulations is needed to increase walleye densities. In response to the conclusions of this latest research, a protected slot limit of 17-22 inches was implemented in 2007 on the Iowa Great Lakes and Storm Lake. The daily bag limit of 3-fish per day was retained, but only one walleye over 22 inches may be harvested. The minimum length limit of 14 inches was maintained on Clear Lake. Angler creel surveys are currently being conducted to evaluate the regulation.

Current research will monitor broodstock densities, assess various life history characteristics of the broodstock populations, and evaluate stocking success. Populations are being monitored using creel surveys, mark and recapture tagging, and extensive age and growth analysis. Stocked walleye cohorts are also being differentiated using innovative marking techniques to evaluate their contribution to the fishery. This information will help us understand the impacts of changes in harvest regulations and stocking strategies. Ultimately, findings will guide decisions and strategies for managing walleye populations in Iowa's natural lakes.